



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/460,960

12/14/1999

MATTHEW ZAVRACKY

0717.1128001

3174

21005

7590

01/24/2006

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

EXAMINER

NGUYEN, KIMNHUNG T

ART UNIT

PAPER NUMBER

2677

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/460,960	ZAVRACKY ET AL.	
	Examiner	Art Unit	
	Kimnhung Nguyen	2677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-18,20-31 and 86-100 is/are pending in the application.
- 4a) Of the above claim(s) 32-85 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-18,20-31 and 86-100 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Application has been examined. The claims 1-4, 6-18, 20-31 and 86-100 are pending. The claims 32-85 are withdrawn. The examination results are as following.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6-18, 20-31 and 86-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobsen et al. (US patent 6,232,937) in view of Walsh (US patent 5,886,681).

Regarding claims 1-2, 14, and 18, 86-91, Jacobsen et al. discloses a method of displaying an image on a liquid crystal display (see abstract) having a plurality of pixel electrodes (see column 6, lines 39-46); automatically adjusting the brightness of the light source (see control circuit 1122 can set the duration and timing of the flash of the the backlight 111, therein achieving desired brightness, see col. 11, lines 63-65); writing an image to the display such that the liquid crystal moves to an image position (see column 9, lines 56-65); and repeating the writing, flashing, and setting steps to produce a sequence of a images (see column 9, lines 15-28, and column 10, lines 20-41).

However, Jacobsen et al. do not disclose detecting an ambient light level with a sensor; automatically selecting a light source based on the detected ambient light level; automatically adjusting the brightness being dependent on the detected ambient light level.

Walsh et al. discloses in figs. 6 and 10, a dual backlight apparatus having detecting an ambient light level with a sensor (see photo sensors devices 123 a and 123b, see col. 3, lines 63-67, col. 4, lines 1-5, col. 6, lines 15-28); automatically selecting a light source based on the detected ambient light level, the brightness being dependent on the detected ambient light level (see col. 6, lines 15-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a dual backlight apparatus having detecting an ambient light level with a sensor automatically selecting a light source based on the detected ambient light level, the brightness being dependent on the detected ambient light level as taught by Walsh et al. into the system of Jacobsen et al. because this would provide to the user any response to automatically provide seamless integration of both classes of night-lighting with daylight illumination along a continuum for the sake of flexibility (see col. 5, lines 32-36).

Regarding claims 3,15, 92 Jacobsen et al. disclose that wherein the liquid crystal is an active matrix display having at least 75,000 pixel electrodes and having an active area of less than 160mm square (see claim 1).

Regarding claims 4 and 17, Jacobsen et al. discloses further the liquid crystal display is transmissive and the light source is a backlight (1111, see figures 2G, 2F, column 10, lines 32-35).

Regarding claim 16, Jacobsen et al. disclose in figures 2G and 2F that wherein the light source has at least one light emitting diode (LED 1111)

Regarding claims 6-8, 94-95, Jacobsen et al. discloses the step of switching the voltage of the counter electrode after each flashing of the light source and prior to the next writing of the

Art Unit: 2677

image (see column 11, lines 36-42), and the voltage to each pixel electrode is done sequentially starting at one corner and progressing until ending the opposite corner (see column 11, lines 51-54).

Regarding claims 9-13, 20, and 96-100, Jacobsen et al. discloses further a method comprising the step of waiting a setting time to allow the liquid crystal to twist between the writing of the last pixel and the flashing of the light source (see figure 21, column 12, lines 42-53) and the display is accomplished by writing a plurality of pixel electrodes simultaneously (see claim 1), and the method further comprising a process to discharge the storage capacitor of the pixel (see column 11, lines 18-30).

Regarding claims 21, 89, Jacobsen et al. discloses an active matrix liquid crystal display comprising an active matrix circuit having an array of transistor circuit formed in a first plane, each transistor circuit being connected to a pixel electrode in an array of pixel electrodes; an integrated circuit display controller connected to the active matrix circuit, the controller including a read memory, a write memory and a timing control circuit; a counterelectrode panel extending in a second plane that is parallel to the first plane, such that the counterelectrode panel receives an applied voltage; and a liquid crystal layer interposed in a cavity between the two planes (see figure 2B, see claims 1 and 8, and see column 8, lines 25-45).

However, Jacobsen et al. does not disclose an array of pixel electrodes having an area of 200mm squares or less.

It would have been obvious for Jacobsen et al.'s system to have the an array of pixel electrodes having an area of 200mm squares or less as claimed since such a modification would have involved a mere change in range of a system. Note of Jacobsen et al. disclose that an array

Art Unit: 2677

of pixel electrodes having an area of less than 160mm (see claim 18). A change in range is generally recognized as being within the level of ordinary skill in the art.

See In re Rose, 105 USPQ 237 (CCPA 1995) and

See In re Reven, 156 USPQ 697 (CCPA 1968).

Regarding claims 22-31, Jacobsen et al. teaches generally all the limitation as discussed in claim 21. Furthermore, Jacobsen et al. also discloses the active matrix crystal display comprising circuit for setting voltage of the pixel electrodes to the voltage of the counterelectrode to each subframe (see column 12, lines 29-41); further comprising circuit to heat the liquid crystal display (see column 11, lines 66-67); a sensor interposed between the substrates to monitor a property of the liquid crystal (see figure 2F, column 11, lines 43-45, and see claim 3); and wherein the writing of the image to the display by setting the voltage to each pixel electrode is done sequentially starting at one corner and progressing until the opposite corner (see column 11, lines 51-45); and wherein the property that is measured is the temperature of the liquid crystal (see claim 19); Jacobsen et al. also discloses the property that is measures is the capacitance of the liquid crystal (see column 11, lines 18-30).

However, Jacobsen et al. does not disclose the array of transistor circuits are formed on an oxide layer and layer is thinned at the pixel electrodes.

It would have been obvious for Jacobsen et al.'s system to have the array of transistor circuits are formed on an oxide layer and layer is thinned at the pixel electrodes as claimed since such a modification would have involved a mere change a material of a system. Note of Jacobsen et al. disclose that the array of transistor circuits are formed over a silicon-on an

Art Unit: 2677

insulator (SIO) structure oxide layer and layer is thinned at the pixel. A change in material is generally recognized as being within the level of ordinary skill in the art.

See In re Rose, 105 USPQ 237 (CCPA 1995) and

See In re Reven , 156 USPQ 697 (CCPA 1968).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number is (571) 272-7698. The examiner can normally be reached on MON-FRI, FROM 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimnhung Nguyen
January 12, 2006

AMR A. AWAD
PRIMARY EXAMINER

